

REMARKS

Claims 1 and 19 are currently amended. Claims 17 and 20 were previously presented. Claims 2-16, 18 and 21-37 are original. Claims 38-44 have been previously cancelled.

The Examiner has objected to claim 19 for lack of antecedent basis for "said indentation surface nadir" and "said thumb rest area nadir. Claim 19 has been amended to introduce proper antecedent basis for these elements.

The Examiner rejected claims 1-37 under 35 USC 103(a) as being unpatentable over Hcron et al., US Design Patent 295,011, in view of Mosley, US Design Patent Des.397,018.

Claim 1, reads:

1. (currently amended) An implement handle graspable by a hand of an intended user and connectable to an implement head, said hand including a thumb, an index finger, a middle finger, a ring finger and a small finger, each extending from a palm, each of said fingers including a pair of corresponding finger lateral surfaces and a corresponding distal pulp; said implement handle comprising:

- **a generally elongated and substantially rectilinear body** defining a body longitudinal axis, a body forward end for connection to said implement head and a longitudinally opposed body rearward end; said body also defining a body top surface and a substantially opposed body bottom surface;
- **said body defining an encircable section** located intermediate said body forward and rearward ends, said encircable section being configured and sized so as to be graspable

between at least a portion of said palm and at least a portion of at least either one of said middle, ring or small fingers at least partially encircling said encirclable section;

said body top surface being provided with an identifiable thumb rest area located intermediate said encirclable section and said body forward end for contacting at least a portion of the distal pulp of said thumb, said thumb rest area defining a rest area forwardmost location;

- said body bottom surface being provided with a substantially concave indentation defining an indentation surface located intermediate said encirclable section and said body forward end for contacting at least a portion of one of said finger lateral surfaces of said index finger with the latter in substantially perpendicular relationship with said body longitudinal axis;

- said indentation surface having a substantially arcuate cross-sectional configuration defining an indentation first end located substantially adjacent said encirclable section and an indentation second end located substantially adjacent to said body forward end, said indentation second end defining an indentation end point; said body defining a cross-sectional first reference plane extending in a substantially perpendicular relationship with said body longitudinal axis and intercepting said indentation end point, said indentation surface being configured and sized so that at least a section of said indentation surface is positioned forwardly relative to said first reference plane; and

- said encirclable section having a substantially fusiform configuration tapering towards said body rearward end and tapering forwardly towards both said thumb rest area and said indentation;

- whereby, in use, said intended user is able to position said thumb so that said distal pulp thereof abuttingly contacts said thumb rest area and to position said middle, ring and small fingers such that said middle, ring and small fingers are wrapped around said encircable section for pressing said encircable section against said palm while said index finger is positioned in said indentation with at least a portion of said one of said finger lateral surface thereof and said pulp section thereof in abutting contact with said indentation surface." (emphasis added)

The Applicant respectfully submits that the emphasized limitations are not all disclosed by Heron. Indeed, Heron describes a knife including an indentation for receiving an index finger thereinto. However, if a plane similar to the claimed reference plane were defined in Heron, this plane would be placed in front of the indentation as the indentation shown in Heron does not curve back longitudinally towards the rear of the knife illustrated thereinto. Accordingly, the Applicant respectfully submits that amended claim 1 is not taught by Heron.

Furthermore, the Applicant respectfully submits that the claimed invention is also not obvious in view of Heron. Indeed, **the claimed invention has functional advantages** with respect to the cited art and is not a trivial variation in design. More specifically, as mentioned at numerous places in the specification, in addition to serving as a guard to prevent a finger from moving, the claimed indentation produces a synergetic effect between the shape of the indentation and the orientation and positioning of the indentation that

- allows for gripping the handle through a combination of power and precision grips, hence allowing for a firm grip to be obtained without sacrificing on precision and accuracy (see for example page 12, 1st paragraph);
- corresponds to the normal physiological alignment of the digits when the latter are flexed separately at the metacarpophalangeal and proximal interphalangeal joints so that their respective axes physiologically converge towards the scaphoid tubercle; also, the configuration of an encirclable section of the claimed handle allows the digits to be ergonomically wrapped, at least partially therearound; furthermore by having the digits urge the encirclable portion against the palm of the hand of the user, the benefits of a power grip including strength and force are provided. Yet furthermore, by allowing the index and thumb fingers to be in opposition relative to each other, benefits of a pinch grip, including precision and accuracy are also provided. Yet furthermore, the configuration of the claimed handle is such that all of the fingers as well as the palm are provided with optimized contact surfaces so as to reduce the need for a strong gripping force to be applied and so as to distribute the stress on a larger contact surface hence reducing the pressure on the pressure points (see for example page 28).

Accordingly, the Applicant respectfully submits that the claimed invention is not obvious in view of Hicon.

Furthermore, the Applicant respectfully submits that amended claim 1 is not anticipated by Mosley as the handle shown in this document clearly does not have a rectilinear body as claimed in claim 1, and illustrated in all drawings, but instead has a curved body. The Applicant respectfully submits that the claimed shape is not provided for esthetic or visual

appearance reasons but instead adds functionality to the handle and interacts with the presence of the thumb rest area and of the indentation surface to provide a handle that is more ergonomic than any of the handles shown in Heron and in Mosley. What seems a relatively small change in shape and the addition of small details to either of the handles shown in Heron and Mosley provides a new and unexpected result of a more ergonomic handle allowing easily an intended user to use either a "hammer grip" or a "pinch grip" and to easily go from one grip to the other as needed with minimal risks of dropping the handle, which could cause injuries to the intended user, for example in the case in which the handle is the handle of a knife, as in the art cited by the Examiner. As stated in the application as filed (last paragraph of p. 27 and p. 28), and as included partially in the whereby clause of amended claim 1:

"In use, the intended user first positions his/her thumb 14 so that the distal pulp section 28 thereof abuttingly contacts the thumb rest area 42. The middle, ring and small fingers, 18, 20 and 22 are then wrapped around the encirclable section 40 for pressing the latter against the palm 24 while the index finger 16 is positioned in the indentation 46, with at least a portion of the lateral section 26 and of the pulp section 28 thereof in abutting contact with the indentation surface 48.

It should be noted that during oblique flexion of the last four digits, the index, middle, annular and small fingers 16 through 22, only the index ray flexes towards the median axis in a somewhat perpendicular relationship with the body longitudinal axis 30. This corresponds to the normal physiological alignment of the digits when the latter are flexed separately at the metacarpophalangeal and proximal interphalangeal joints so that their

respective axes physiologically converge towards the scaphoid tubercle. The configuration of the encircable section 40 allows the digits to be ergonomically wrapped, at least partially therearound.

By having the digits 16 through 22 urge the encircable portion 40 against the palm 24, the benefits of a power grip including strength and force are provided. Also, by allowing the index and thumb fingers 16, 14 to be in opposition relative to each other, **benefits of a pinch grip, including precision and accuracy are also provided.**

Furthermore, all of the fingers 14 through 22 as well as the palm 24 are provided with **optimized contact surfaces** so as to reduce the need for a strong gripping force to be applied and, so as to distribute the stress on a larger contact surface hence reducing the pressure on the pressure points."

In conclusion, the Applicant respectfully submits that claim 1 is neither anticipated by nor obvious in view of Mosley.

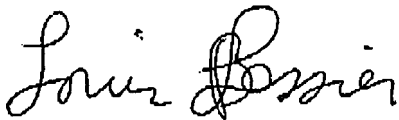
Furthermore, the Applicant respectfully submits that there is no suggestion to combine Mosley and Heron. Indeed, these two documents present drawings of very differently shaped handles. Since they are industrial designs, there is no description in these documents and therefore no suggestion in any of these documents that they may be combined. As mentioned hereinabove, the features of the claimed invention have been provided to interact with each other to create a synergy providing an ergonomic handle that better

conforms to the anatomy of the human hand than any of the handles presented by the Examiner in the Office Action. The claimed invention has not been conceived by merely adding features to each other without any interaction between these features, but instead has been conceived to take into account the anatomy of the human hand to provide an improved handle improving on the ergonomicity of prior art handles. Furthermore, the handles of Mosley and Heron are held very differently from each other by intended users due to the fact, among other reasons, that the sections thereof that are encircable by the fingers of the intended users are at different angles. For this additional reasons, the Applicant respectfully submits that there would be no motivation to combine these two references as the resulting handle would be used very differently from them manner in which each of the handles is individually used.

In view of the above, the applicant respectfully requests that the rejection of claim 1 in view of Heron and Mosley be withdrawn, along with the rejection of claims 2-37 that depend directly or indirectly thereon.

It is respectfully submitted that when the rejection of the claims be reviewed in light of Applicant's arguments, the invention without a doubt should be considered patentably distinguished over the currently applied references. It is now believed the above application is in order for Allowance and such action would be appreciated.

Very Respectfully submitted.

A handwritten signature in cursive script, appearing to read "Louis Tessier".

Louis Tessier, Reg. No. 45,289
Patent Agent